AMENDMENT TO THE CLAIMS

1. (Currently Amended)   A speech ~~detection~~ recognition system, comprising:

an audio microphone outputting a microphone signal based on a sensed audio input;

a speech sensor outputting a sensor signal based on a non-audio input generated by speech action; ~~and~~

a speech detector component outputting a speech detection signal indicative of ~~whether~~ a probability that a user is speaking based on the microphone signal and based on a level of variance in a first characteristic of the sensor signal and based on the microphone signal, wherein the first characteristic of the sensor signal has a first level of variance when the user is speaking and a second level of variance when the user is not speaking and wherein the speech detector component outputs the speech detection signal based on the level of variance of the first characteristic of the sensor signal relative to a baseline level of variance of the first characteristic that comprises a level of a predetermined one of the first and second levels of the characteristic over a give time period. the speech detection component further calculating a combined signal by multiplying the speech detection signal by the microphone signal; and

a speech recognizer recognizing speech to provide a recognition output indicative of speech in the microphone signal based on the combined signal, wherein recognizing speech comprises:

increasing a likelihood that speech is recognized by an amount based on a probability that the speech detection signal indicates that the user is speaking; and

decreasing a likelihood that speech is recognized by an amount based on a probability that the speech detection signal indicates that the speaker is not speaking.

2. Canceled.

3. Canceled.

4. Canceled.

5. (Previously Amended)   The speech detection system of claim 1 wherein the baseline level is calculated by averaging the level of the variance of the first characteristic over the time period.

6. (Previously Amended)   The speech detection system of claim 1 wherein the baseline level is recalculated intermittently during operation of the speech detection system.

7. (Previously Amended)   The speech detection system of claim 6 wherein the baseline level is recalculated periodically to represent the variance level of the first characteristic over a revolving time window.

8. (Previously Amended)   The speech detection system of claim 6 wherein the speech detection component outputs the speech detection signal based on a comparison of the level of the variance of the first characteristic of the sensor signal to the baseline level, and wherein the comparison is performed periodically.

9. (Previously Amended)   The speech detection system of claim 8 wherein the comparison is performed more frequently than the baseline level is recalculated.

10. (Original) The speech detection system of claim 1 wherein the audio microphone and the speech sensor are mounted to a headset.

11. (Currently Amended)   A speech recognition system, comprising:

    a speech detection system comprising:

    an audio microphone outputting a microphone signal based on a sensed audio input;

a speech sensor outputting a sensor signal based on a non-audio input generated by speech action; and

a speech detector component outputting a speech detection signal indicative of ~~whether~~ a probability that a user is speaking based on the microphone signal and the sensor signal wherein the speech detector component calculates ~~the speech detection~~ a combined signal by multiplying the speech detection signal by the microphone signal; ~~as a speech detection measure, indicative of a probability that the user is speaking, and combines the speech detection measure with the microphone signal to generate a combined signal, the combined signal being a product of the probability and the microphone signal;~~ and

a speech recognition engine recognizing speech to ~~providing~~ provide a recognition output indicative of speech in the sensed audio input based on the combined signal;

increasing a likelihood that speech is recognized by an amount based on a probability that the speech detection signal indicates that the user is speaking; and

decreasing a likelihood that speech is recognized by an amount based on a probability that the speech detection signal indicates that the speaker is not speaking.

12. Canceled.

13. Canceled.

14. Canceled.

15. Canceled.

16. Canceled.

17. (Original) The speech recognition system of claim 11 wherein the audio microphone and the speech sensor being mounted on a headset.

18. (Currently Amended)   A method of recognizing speech, comprising:

generating a first signal, indicative of an audio input, with an audio microphone;

generating a second signal indicative of facial movement of a user, sensed by a facial movement sensor;

~~detecting whether the user is speaking based on the first and second signals;~~ ~~and~~generating a third signal indicative of a probability that the user is speaking based on the first and second signals;

generating a fourth signal by multiplying the probability that the user is speaking by the first signal; and

recognizing speech based on the ~~first~~ fourth signal and the speech detection signal, wherein recognizing speech comprises:

increasing a likelihood that speech is recognized by an amount based on a probability that the speech detection signal indicates that the user is speaking; and

decreasing a likelihood that speech is recognized by an amount based on a probability that the speech detection signal indicates that the speaker is not speaking.

19. (Original) The method of claim 18 wherein generating the second signal comprises:
sensing vibration of one of the user's jaw and neck.

20. (Original) The method of claim 18 wherein generating the second signal comprises:
sensing an image indicative of movement of the user's mouth.

21. (Original) The method of claim 18 and further comprising:
providing a speech detection signal based on detecting whether the user is speaking.

22. Canceled.

23. Canceled.